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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,322	08/08/2001	Edouard Francois	PF000079	3591

7590 03/15/2006

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EXAMINER	
WONG, ALLEN C	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,322	FRANCOIS ET AL.	
	Examiner	Art Unit	
	Allen Wong	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/10/06 have been fully read and considered but they are not persuasive.

Regarding lines 11-13 on page 5 of applicant's remarks applicant asserts that Chen does not disclose "if the decoding mode is of the "inter" type with no residue, the conversion is performed", as recited in claims 1, 7 and 8. The examiner respectfully disagrees. In col.11, ln.9-14, Chen teaches the determination of coding mode is done in that intra-coding or inter-coding are the two coding modes used, as illustrated in fig.3. The switch 325 is activated to let the image data go through to the adder 330, and that the switch 327 is activated to let the image data to got through adder 345 for performing the conversion by copying a converted pixel group of a preceding image. Note the preceding image, compensated in chroma compensators 320 and 325, is linked by motion vector MV associated with the coded pixel group 4:2:2. The format conversion is done from 4:2:2 to 4:2:0. Thus, Chen teaches "if the mode of coding used is of the 'inter' type with no residue, the conversion is performed by a copy of a converted pixel group of a preceding image linked by the motion vector associated with said coded pixel group."

Regarding lines 21-23 on page 5 and lines 1-3 on page 6 of applicant's remarks, applicant argues that Chen does not disclose "a copy of a converted group pixel group of a preceding image linked by the motion vector associated with said coded pixel group", as recited in claims 1, 7 and 8. The examiner respectfully disagrees. In col.11,

In.9-14, Chen teaches the determination of coding mode is done in that intra-coding or inter-coding are the two coding modes used, as illustrated in fig.3. The switch 325 is activated to let the image data go through to the adder 330, and that the switch 327 is activated to let the image data to got through adder 345 for performing the conversion by copying a converted pixel group of a preceding image. Note the preceding image, compensated in chroma compensators 320 and 325, is linked by motion vector MV associated with the coded pixel group 4:2:2. The format conversion is done from 4:2:2 to 4:2:0.

Regarding lines 25-29 on page 6 of applicant's remarks, applicant contends that neither Chen nor Lim disclose "if the decoding mode is of the "inter" type with no residue, the conversion is performed by a copy of a converted pixel group of a preceding image liked by the motion vector associated with said coded pixel group" as recited in claims 1, 7 and 8. The examiner respectfully disagrees. See above paragraphs and in the rejection below. Because Chen does not specifically disclose the limitation of comprising a first step for decoding the coded data and then the second step of converting of the decoded data. Specifically, Lim teaches the first step of decoding the coded data and then the second step of converting the data (fig.9, note element 92 discloses the first step of decoding the coded data, and then, note the second step of performing the format conversion of data at element 93). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chen and Lim together as a whole for providing an improved visual quality at the

decoding terminal for viewing at the television display, as disclosed in Lim's column 5, lines 1-3.

Chen and Lim are reasonably combinable and useable together because both pertain to the same analogous video encoding/decoding processing environment.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chen and Lim together as a whole for providing an improved visual quality at the decoding terminal for viewing at the television display, as disclosed in Lim's column 5, lines 1-3.

Regarding lines 8-10 on page 9 of applicant remarks, applicant asserts that Kato does not disclose coding mode is determined from the "skipped macroblock" or "uncoded mode" as claimed in claim 4. The examiner respectfully disagrees. In col.4, ln.34-38 and col.8, ln.38-41, Chen discloses the image data is coded by MPEG and identification of macroblock type. Chen and Lim do not specifically disclose the coding mode is determined from the "skipped macroblock" or "uncoded" mode. However, Kato's col.24, ln.35-53 teaches the coding mode is determined from the "skipped macroblock" or "uncoded" mode. Therefore, it would have been obvious to one of

ordinary skill in the art to combine the teachings of Chen, Lim and Kato, as a whole, for implementing a simpler, less complex process of accurately determining the coding mode so as to produce clear, high quality images, as disclosed in Kato's col.12, ln.38-55. Thus, claim 4 is rejected for at least the same reasons as claim 1 as explained above.

Regarding lines 10-14 on page 9 of applicant's remarks, applicant states that neither Chen, Lim nor Kato disclose "if the decoding mode is of the "inter" type with no residue, the conversion is performed by a copy of a converted pixel group of a preceding image liked by the motion vector associated with said coded pixel group" as recited in claims 1, 7 and 8. The examiner respectfully disagrees. See the above paragraphs and the rejection below for elaboration of these limitations.

In response to applicant's argument, on pages 9-10 of applicant's remarks, that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chen and Kato, as a whole, for implementing a simpler, less complex process of accurately determining the coding mode so as to produce clear, high quality images, as disclosed in Kato's column 12, lines 38-55.

Thus, the rejection of the claims is maintained.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,259,741) in view of Lim (6,333,952).

Regarding claims 1, 7 and 8, Chen discloses a process for the format conversion of an image sequence employing video data coded on the basis of a structure of pixel groups (see col.3, ln.32-35 and fig.3, note format conversion goes from pixel groups 4:2:2 to 4:2:0), wherein, for a coded pixel group to be converted, if the decoding mode is of the "inter" type with no residue, the conversion is performed by a copy of a converted pixel group of a preceding image linked by the motion vector associated with said coded pixel group (col.11, ln.9-14; fig.3, note intra coding mode or inter coding mode is determined, and if inter coding mode is used, switch 325 is activated to pass image data to adder 330 and switch 327 is activated to pass image data to adder 345 so as to perform conversion by copying a converted pixel group of a preceding image, preceding image compensated in chroma compensators 320 and 325, linked by motion vector MV associated with the coded pixel group 4:2:2).

Chen does not specifically disclose the limitation of comprising a first step for decoding the coded data and then the second step of converting of the decoded data.

However, Lim specifically teaches where there is a first step of decoding the coded data and then the second step of converting the data (fig.9, note element 92 discloses the first step of decoding the coded data, and then, note the second step of performing the format conversion of data at element 93). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chen and Lim together as a whole for providing an improved visual quality at the decoding terminal for viewing at the television display (Lim col.5, ln.1-3).

Regarding claim 2, Chen discloses wherein if the motion vector associated with the pixel group is null, the conversion is performed by recopy of the co-located pixel group and, if the motion vector is different from zero, the conversion is performed by motion compensation in a preceding converted image (col.11, ln.6-14 and fig.3, if pixel group is null or zero, the conversion is done by sending the co-located pixel group, and if the motion vector is non-zero, then conversion is performed by motion compensation 320 and 325).

Regarding claim 3, Chen discloses the image data is coded by MPEG and coding block pattern (CBP) is used for identifying the type of macroblock (col.4, ln.34-38 and col.8, ln.38-41).

Regarding claims 5 and 6, Chen discloses the conversion being supplemented with a simple mathematical operation applicable at the decoded pixel group level to modify the display (fig.3, note decoded pixel group is mathematically applied through the inverse quantization 310 and inverse discrete cosine transformation 315, then the output of element 315 is added with offset result from switch element 325).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,259,741) and Lim (6,333,952) in view of Kato (5,701,164).

Regarding claim 4, Chen discloses the image data is coded by MPEG and identification of macroblock type (col.4, ln.34-38 and col.8, ln.38-41). Chen and Lim do not specifically disclose the coding mode is determined from the "skipped macroblock" or "uncoded" mode. However, Kato teaches the coding mode is determined from the "skipped macroblock" or "uncoded" mode (col.24, ln.35-53). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chen and Kato, as a whole, for implementing a simpler, less complex process of accurately determining the coding mode so as to produce clear, high quality images (Kato col.12, ln.38-55).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen Wong
Primary Examiner
Art Unit 2613

AW
3/9/06